

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 04 NOV 2005

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Applicant's or agent's file reference 03MO 0520WOP	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/EP2004/013584	International filing date (day/month/year) 30.11.2004	Priority date (day/month/year) 05.12.2003
International Patent Classification (IPC) or national classification and IPC H01R12/08, H01R12/24, H01R13/52		
Applicant MOLEX INCORPORATED et al.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ sent to the applicant and to the International Bureau) a total of sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the opinion

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability


☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 09.09.2005	Date of completion of this report 03.11.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Chelbosu, L Telephone No. +49 89 2399-6974



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/013584

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-21 as originally filed

Claims, Numbers

1-19 as originally filed

Drawings, Sheets

1/12-12/12 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/013584

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	9-11
	No: Claims	1-8,12-19
Inventive step (IS)	Yes: Claims	9-11
	No: Claims	1-8,12-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement.**

1. STATE OF THE ART

Reference is made to the following documents:

- D1: US 2002/173199 A1 (LIEGL ERWIN ET AL) 21 November 2002
- D2: DE 101 42 363 A1 (DELPHI TECHNOLOGIES, INC) 27 March 2003
- D3: US 2002/031934 A1 (HARA TERUFUMI ET AL) 14 March 2002
- D4: US-B1-6 196 863 (SCHWANT WILFRIED) 6 March 2001
- D5: US 2001/023149 A1 (MURAYAMA TOSHISADA) 20 September 2001
- D6: EP-A-0 722 624 (N.V. RAYCHEM S.A) 24 July 1996

2. LACK OF NOVELTY

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document **D1** discloses (the references in parentheses applying to this document):

a connector (see fig. 1) for sealed connection of flat cable arrangement (fig. 1, reference 6) comprising:
an external housing (fig. 1, reference 1), which has an insertion opening (fig. 3 and 4, references 30,39,20,29) for the insertion of the flat cable arrangement (fig. 1, reference 6),
at least one sealing element (fig. 1, references 12,13) comprising compressed gel (see for example description, paragraph 21), which at a connection area of the insertion opening for the flat cable arrangement being so arranged that it only comes into effective contact with the flat cable arrangement when the said cable arrangement is in an inserted condition (see for example fig. 1), and
a device for the pressurization (fig. 1-4, references 2,3,44,45,54,55) of the at

least one sealing element for sealing at least the connection area of the flat cable arrangement in inserted condition.

Therefore, the subject-matter of claim 1 is not novel.

Furthermore, the subject-matter of independent claim 1 is also disclosed in each of documents D2-D4 (see the corresponding passages cited in the search report).

- 2.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 18 is not new in the sense of Article 33(2) PCT:

The document **D1** discloses (the references in parentheses applying to this document):

a connector system, comprising at least one connector (see fig. 1) with a flat cable arrangement connected to it, wherein
at least two pressurized sealing elements (fig. 1, references 12,13) positioned at the connecting point / area in the connector on each side of the flat cable arrangement, with at least one of the sealing elements being made out of compressed gel.

Therefore, the subject-matter of claim 18 is not novel.

Furthermore, the subject-matter of independent claim 18 is also disclosed in documents D2 and D3 (see the corresponding passages cited in the search report).

- 2.3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 19 is not new in the sense of Article 33(2) PCT.

The document **D1** discloses (the references in parentheses applying to this document):

the use of a compressed gel, in particular in the form of a pillow or cushion, as a sealing element for a connector and/or connector system.

Therefore, the subject-matter of claim 19 is not novel.

Furthermore, the subject-matter of independent claim 19 is also disclosed in each of documents D2-D4 (see the corresponding passages cited in the search report).

2.4 The attention of the applicant is drawn upon the fact that, as long as the three not new independent claims 1, 18 and 19 are not so linked as to form a **single general inventive concept** (each of said claims discloses features of known but not inter-related or alternative sealed connectors), said claims are non-unitary (Rule 13.1 PCT). This Authority chose not to invite the applicant to pay additional fees because, at this stage, no major procedure efforts are caused.

3. DEPENDENT CLAIMS

3.1 Dependent claims 2-8 and 12-17 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty:

- document D1 discloses the additional features of claims 2-8 and 12-17; see therefore, the corresponding passages and figures cited in the search report;
- the additional features of claims 1-8, 12 and 17 are also disclosed in D2 and D3 (see the corresponding passages and figures cited in the search report);
- furthermore, the additional features of claims 1, 3-8, 12 and 17 are also disclosed in D4 (see the corresponding passages and figures cited in the search report).

3.2 The additional features of claims 9-11, namely:

- the connector comprises two sealing elements, which are moveable in a pincer-like movement in direction of the upper and lower side of the cable in order to provide an uniform increased pressure on both of surfaces of the flat multiconductor cable and thus, to improve the sealing action of the gel sealing elements (claim 9),
 - the additional guiding means further improves the pincer-like movement mentioned above and thus, the precision of the sealing action is increased (claim 10),
 - an equivalent alternative of the above mentioned movement, in order to improve the sealing action of the gel sealing elements (claim 11),
- are neither known from, nor rendered obvious by the available prior art.

4. MISCELLANEOUS

The applicant has to take into consideration also the following remarks:

- some correction have to be made in the description:
 - page 15, line 12: instead **101** as reference sign for "the plate-like frame elements" it should be **104**;
 - page 20, line 1: instead "constructedon" it should be "constructed on";
 - page 20, line 18: instead **123** as reference sign for "the opening cover" it should be **120**;
- independent claim 1 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art being placed in the preamble [Rule 6.3(b)(I) PCT] and with the remaining features being included in the characterising part [Rule 6.3(b)(ii) PCT];
- in claim 2, using the wording of "**the** connection point" lacks of clarity since said feature of "connection point" is not already disclosed; when the applicant means that different wording, namely "connecting point", "connecting area" or "connection area" is used for the same feature (see also the description), he should bear in mind that lack of consistency arises (Art. 5 and 6 PCT).